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Changes of photosynthesis and carbon metabolism in typha angustifolia L grown in conditions of nitrate nitrogen overload

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Abstract

Nitrates may induce alterations in NO-signaling system and change photosynthesis in plants. Significant reduction of 14CO 2 fixation was noted at concentration of 3.96 mM NaNO 3 in an aquatic macrophyte (Typha angustifolia L.). Assimilation of 14CO 2 seven days after the introduction of nitrates did not differ between control and experimental samples. There were changes in distribution of 14C among products of 4CO 2 fixation 4 h after NaNO 3 addition, resulting in increased sugar radioactivity in experimental plants. It was suggested that the observed changes may have regulatory importance.

Keywords

Aquatic macrophyte, Carbon metabolism, Nitrate, Photosynthesis